Climate Change and Water Working Group (CCAWWG) Updates and Activities

Dave Raff, PhD, PE Reclamation
Kate White, PhD, PE USACE

USGS – USACE HQ Meeting

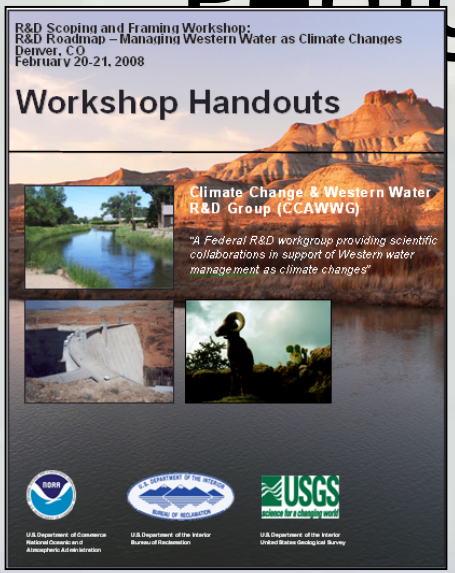
February 2nd, 2010

Upcoming CCAWWG

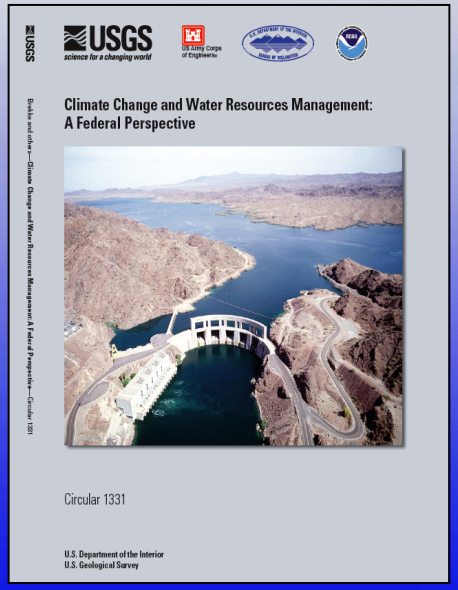
- CCAWWG *Climate Change* **User Needs** for Improving Tools and Information Document
  - Review Process
- CCAWWG *Climate Variability* Use of Weather and Climate Forecasts in Federal Water Resources Management: Current Capabilities, Required Capabilities, and Gaps
- Climate Change End-to-End Methodology Workshop

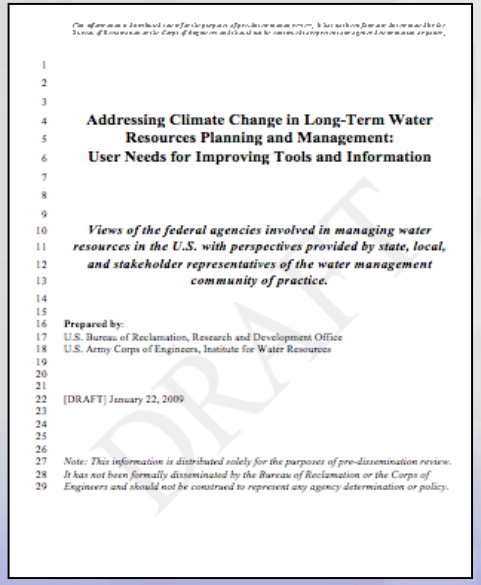
User Needs Document Pedigree

CCAWWG February 2008 Workshop


R&D Scoping and Framing Workshop:
R&D Roadmap – Managing Western Water as Climate Changes
Denver, CO
February 20-21, 2008
Workshop Handouts
Climate Change & Western Water R&D Group (CCAWWG)
"A Federal R&D workgroup providing scientific collaborations in support of Western water management as climate changes"
U.S. Department of Commerce National Oceanic and Atmospheric Administration
U.S. Department of the Interior Bureau of Reclamation
U.S. Department of the Interior United States Geological Survey

USGS Circular 1331 May 2007-February 2009




Addressing Climate Change in Long-Term Water Resources Planning and Management:
User Needs for Improving Tools and Information

Views of the federal agencies involved in managing water resources in the U.S. with perspectives provided by state, local, and stakeholder representatives of the water management community of practice.

Prepared by:
U.S. Bureau of Reclamation, Research and Development Office
U.S. Army Corps of Engineers, Institute for Water Resources

[DRAFT] January 22, 2009

Note: This information is distributed solely for the purposes of pre-dissemination review. It has not been formally disseminated by the Bureau of Reclamation or the Corps of Engineers and should not be construed to represent any agency determination or policy.

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CCAWWG Climate Change User Needs Document

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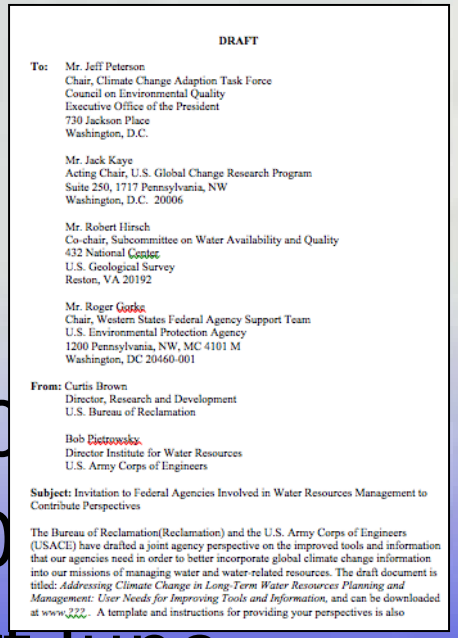
Review Process

- Distribution Target February 10th, 2010
- Internal Review
  - USACE, Reclamation
- External Perspectives
  - Federal, Non-Federal
- Responses Due Mid-March 2010
- Comment Resolution April 2010
- Joint USACE-Reclamation Report June 2010



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To: Mr. Jeff Peterson
Chair, Climate Change Adaption Task Force
Council on Environmental Quality
Executive Office of the President
730 Jackson Place
Washington, D.C.

Mr. Jack Kaye
Acting Chair, U.S. Global Change Research Program
Suite 250, 1717 Pennsylvania, NW
Washington, D.C. 20006

Mr. Robert Hirsch
Co-chair, Subcommittee on Water Availability and Quality
432 National Center
U.S. Geological Survey
Reston, VA 20192

Mr. Roger Gorke
Chair, Western States Federal Agency Support Team
U.S. Environmental Protection Agency
1200 Pennsylvania, NW, MC 4101 M
Washington, DC 20460-001

From: Curtis Brown
Director, Research and Development
U.S. Bureau of Reclamation

Bob Pietrowsky
Director Institute for Water Resources
U.S. Army Corps of Engineers

Subject: Invitation to Federal Agencies Involved in Water Resources Management to Contribute Perspectives

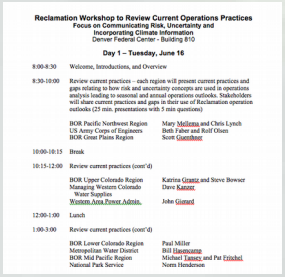
The Bureau of Reclamation(Reclamation) and the U.S. Army Corps of Engineers (USACE) have drafted a joint agency perspective on the improved tools and information that our agencies need in order to better incorporate global climate change information into our missions of managing water and water-related resources. The draft document is titled: *Addressing Climate Change in Long-Term Water Resources Planning and Management: User Needs for Improving Tools and Information*, and can be downloaded at *www.???*. A template and instructions for providing your perspectives is also

Federal Review Outlets

- Council on Environmental Quality (CEQ)
  - Jeff Peterson (Chair, Climate Change Adaptation Task Force)
- U.S. Global Change Research Program (USGCRP)
  - Jack Kaye (Acting Chair)
- Subcommittee on Water Availability and Quality (SWAQ)
  - Bob Hirsch (Co-Chair)
- Western States Federal Agency Support Team (WestFAST)
  - Roger Gorke, Chair

Climate Variability Document

CCAWWG June 2009 Risk and Uncertainty Workshop

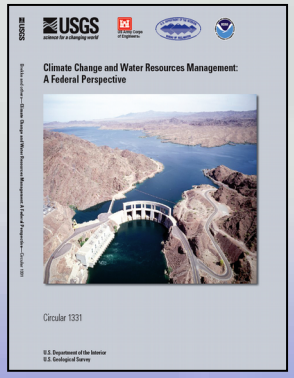


Reclamation Workshop to Review Current Operations Practices
Focus on Communicating Risk, Uncertainty and Incorporating Climate Information
Denver Federal Center - Building 810

Day 1 – Tuesday, June 16

8:00-8:30	Welcome, Introductions, and Overview	
8:30-10:00	Review current practices – each region will present current practices and gaps relating to how risk and uncertainty concepts are used in operations analysis leading to seasonal and annual operations outlooks. Stakeholders will share current practices and gaps in their use of Reclamation operation outlooks (25 min. presentations with 5 min questions)	
	BOR Pacific Northwest Region	Mary Mellema and Chris Lynch
	US Army Corps of Engineers	Beth Faber and Rolf Olsen
	BOR Great Plains Region	Scott Guenthner
10:00-10:15	Break	
10:15-12:00	Review current practices (cont'd)	
	BOR Upper Colorado Region	Katrina Grantz and Steve Bowser
	Managing Western Colorado Water Supplies	Dave Kanzer
	Western Area Power Admin.	John Shepard
12:00-1:00	Lunch	
1:00-3:00	Review current practices (cont'd)	
	BOR Lower Colorado Region	Paul Miller
	Metropolitan Water District	Bill Hasencamp
	BOR Mid Pacific Region	Michael Tansey and Pat Fritchel
	National Park Service	Norm Henderson

USGS Circular 1331 May 2007-February 2009



USGS
science for a changing world

Climate Change and Water Resources Management:
A Federal Perspective

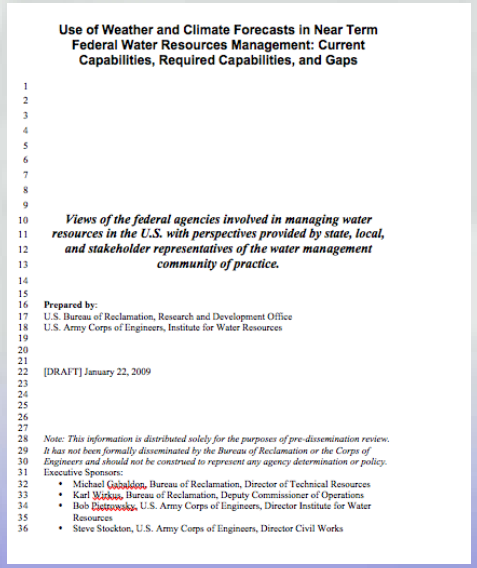
Circular 1331

U.S. Department of the Interior
U.S. Geological Survey

Interagency Nonstationarity Workshop January 2010

Workshop on Nonstationarity, Hydrologic Frequency Analysis, and Water Management

January 13-15, 2010
Millennium Harvest House, Boulder, Colorado



Use of Weather and Climate Forecasts in Near Term Federal Water Resources Management: Current Capabilities, Required Capabilities, and Gaps

Views of the federal agencies involved in managing water resources in the U.S. with perspectives provided by state, local, and stakeholder representatives of the water management community of practice.

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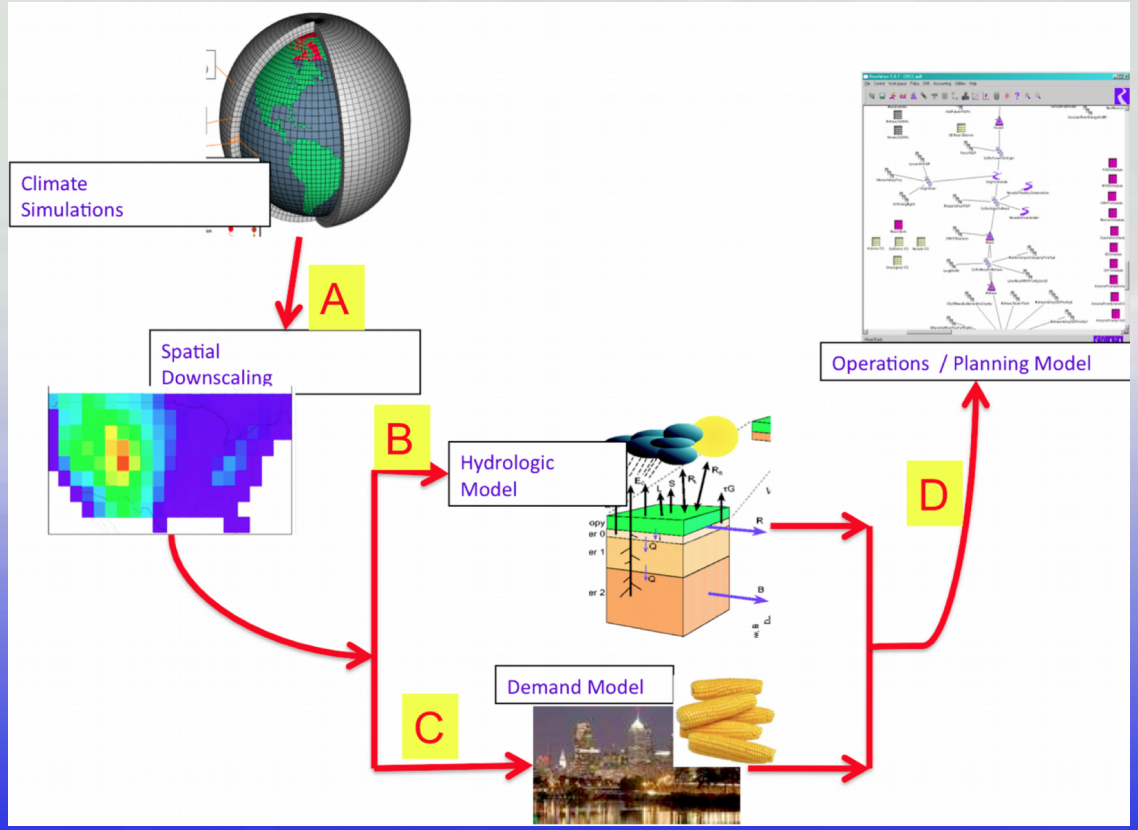
Executive Sponsors:
- Michael Gabaldon, Bureau of Reclamation, Director of Technical Resources
- Karl Wirkus, Bureau of Reclamation, Deputy Commissioner of Operations
- Bob Pietrowsky, U.S. Army Corps of Engineers, Director Institute for Water Resources
- Steve Stockton, U.S. Army Corps of Engineers, Director Civil Works

CCAWWG
Prioritization for Short Term Capabilities

Climate Change Methods End-To-End Workshop June 2010



Planning Activities

USGS
Surface Water, Groundwater, Ecosystems, Etc.
Flood Control, Navigation, Hydropower, Ecosystems Etc..
RECLAMATION
Managing Water in the West
Water Supply, Hydropower, Ecosystem Needs, Recreation, Etc.
NOAA
Climate Change and Variability, Climate and Weather Predictability
EPA
Water Quality, Air Quality, Etc…

- **USACE** – Kate White, Rolf Olsen
- **USGS** – Earl Greene
- **USBR** – Jim Prairie
- **NOAA** – Roger Pulwarty
- **EPA** – Karen Metchis